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JC03 R CT/PTO 23 APR 2001

Attorney Docket: 1574/49849
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: KRISTIINA YULIHONKO ET AL.

Serial No.: NOT YET ASSIGNED

Filed: April 23, 2001

Title: GENE CLUSTER INVOLVED IN NOGALAMYCIN BIOSYNTHESIS,
AND ITS USE IN PRODUCTION OF HYBRID ANTIBIOTICS

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.97 and 1.98**

Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure under 37 CFR §1.56, Applicants hereby notify the U.S. Patent and Trademark Office of the documents which are listed on the attached Form PTO-1449 and which the Examiner may deem relevant to patentability of the claims of the above-identified application.

STATEMENT OF RELEVANCE

The relevance of the listed references to the subject matter of the present invention is given in the specification of the present invention. Applicant also encloses herewith a copy of a corresponding foreign Search Report citing such documents.

Documents AF and AJ were also cited in the International Search Report, forwarded separately to the U.S. Patent and Trademark Office. Thus, copies of these two references are not included herewith.

The present Information Disclosure Statement is being filed (1) no later than three months from the application's filing date or (2) before the mailing date of the first Office Action on the merits (whichever is later), and therefore no certification under 37 C.F.R. §1.97(e) or fee under 37 C.F.R. §1.17(p) is required.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

If necessary, this paper should be considered as a petition for consideration of the Information Disclosure Statement under 37 C.F.R. §1.97(d)(2) and that the petition fee set forth in 37 C.F.R. §1.17(i) in accordance with 37 C.F.R. §1.97(d)(3) should be charged to Deposit Account No. 05-1323 (Docket #1574/49849).

Respectfully submitted,

April 23, 2001



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09/830160

JC03 Reg & PCT/PTO 23 APR 2001

Sheet 1 of 1

| Form PTO-1449 U.S. Department of Commerce Patent & Trademark Office INFORMATION DISCLOSURE STATEMENT <i>(Use several sheets if necessary)</i> | | | Atty. Docket No. 1574/49849 | | Serial No. NOT YET ASSIGNED | | |
|--|----|---|--|-----------------|--------------------------------|-----------|------------------------------|
| | | | Applicants KRISTIINA YULIHONKO ET AL. | | | | |
| | | | Filing Date April 23, 2001 | | Group Art Unit: | | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| Examiner Initial | | Document Number | Date | Name | Class | Sub-Class | Filing Date (if appropriate) |
| | AA | | | | | | |
| | AB | | | | | | |
| | AC | | | | | | |
| | AD | | | | | | |
| | AE | | | | | | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| | | Document | Date | Country | Class | Sub-class | Translation Yes No |
| | AF | WO 96/10581 | 4-11-96 | WIPO | | | |
| | AG | | | | | | |
| | AH | | | | | | |
| | AI | | | | | | |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | | |
| | AJ | Torkkell et al., "Characterization of <i>Streptomyces nogalater</i> genes encoding enzymes involved in glycosylation steps in nogalamycin biosynthesis", Mol Gen Genet, Vol. 256 (1997) pp. 203-209 | | | | | |
| | AK | Ylihonko et al., "Production of hybrid anthracycline antibiotics by heterologous expression of <i>Streptomyces nogalater</i> nogalamycin biosynthesis genes", Microbiology, Vol. 142 (1996) pp. 1965-1972 | | | | | |
| | AL | Ylihonko et al., "A gene cluster involved in nogalamycin biosynthesis from <i>Streptomyces nogalater</i> : sequence analysis and complementation of early-block mutations in the anthracycline pathway", Mol Gen Genet, Vol. 251 (1996) pp. 113-120 | | | | | |
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| EXAMINER | | | | DATE CONSIDERED | | | |
| EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication. | | | | | | | |